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Atty Dkt No.: 134366 (SPLG 1027)

IN THE CLAIMS

1. (currently amended) A method for presenting multiple enhanced images of different anatomic features, comprising:

acquiring an ultrasonic volume data set having multiple anatomic features; and

processing said volume data set to form multiple enhanced images; and

presenting said multiple enhanced images simultaneously, said multiple enhanced images being based on said multiple anatomic features within said volume data set.

2. (original) The method of claim 1, said anatomic features comprising at least one of bone, soft tissue, contrast and vessels.

3. (original) The method of claim 1, further comprising selecting volume rendering techniques, said multiple enhanced images being based on said volume rendering techniques.

4. (original) The method of claim 1, further comprising:  
identifying a plane within said data set; and  
identifying at least one thickness of said plane, said multiple enhanced images being based on said at least one thickness of said plane.

5. (currently amended) The method of claim 1, wherein the processing further comprising processing said volume data set with predefined image enhancing techniques, each of said multiple enhanced images being processed with a different image enhancing technique.

6. (original) The method of claim 1, further comprising:  
said processing step further comprising processing said volume data set in real-time while receiving real-time ultrasonic information; and

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said presenting step further comprising presenting said multiple enhanced images in real-time.

7. (original) The method of claim 1, further comprising selecting volume rendering techniques to enhance said multiple anatomic features, said volume rendering techniques being one of surface texture, maximum density, minimum density, average projection, gradient light rendering, and maximum transparency

8. (currently amended) The method of claim 1, further comprising:  
identifying a plane within said volume data set;  
identifying thicknesses of said plane for each of said multiple enhanced images; and  
wherein the processing said volume data set being based on said thicknesses, each of said multiple enhanced images being based on a different thickness.

9. (original) A method for presenting multiple enhanced images, comprising:  
acquiring a data set comprising volumetric data;  
processing portions of said data set with image enhancing techniques; and  
presenting multiple images based on said portions, each of said multiple images being processed with a different image enhancing technique, said multiple images being presented simultaneously.

10. (original) The method of claim 9, said acquiring step further comprising acquiring said data set using at least one of the following acquisition modes: 3-D volume, 4-D volume, conventional grayscale sonography, B-flow, color Doppler, tissue Doppler, Power Doppler, and harmonic and co-harmonic sonography.

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11. (original) The method of claim 9, further comprising identifying a plane, said plane being a C-plane with respect to said volumetric data, said portions of said data set being based on said plane.

12. (original) The method of claim 9, further comprising:  
identifying a plane within said data set; and  
identifying a depth based on said data set, said portions being based on said plane and having different thicknesses based on at least one of said depth and said different image enhancing techniques.

13. (original) The method of claim 9, said data set further comprising anatomic features, said anatomic features being one of bone, soft tissue, contrast, and vessel, said image enhancing techniques being used to enhance said anatomic features.

14. (original) The method of claim 9, said image enhancing techniques being one of surface texture, maximum density, minimum density, and average projection.

15. (original) The method of claim 9, further comprising:  
identifying an acquisition type; and  
predefining a subset of said image enhancing techniques based on said acquisition type.

16. (original) The method of claim 9, said data set further comprising at least one of ultrasonic data, MR data, and CT data.

17. (original) A system for acquiring and presenting multiple enhanced images, comprising:  
a transducer for transmitting and receiving ultrasound signals to and from an area of interest;

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a receiver for receiving said ultrasound signals comprising a series of adjacent scan planes comprising a volumetric data set;

a processor for processing said series of adjacent scan planes, said processor identifying portions of said volumetric data set being transverse to said series of adjacent scan planes, said processor processing said portions with image enhancing techniques; and

an output for presenting multiple images simultaneously, each of said multiple images being processed with a different image enhancing technique.

18. (original) The system of claim 17, wherein each of said portions comprises at least a common subset of said volumetric data set.

19. (original) The system of claim 17, further comprising:  
an input for identifying a plane within said volumetric data set;  
said processor identifying a depth based on said volumetric data set; and  
at least one thickness control setting a thickness of each of said portions being based on at least one of said depth and said image enhancing techniques.

20. (original) The system of claim 17, further comprising:  
an input for receiving an acquisition type; and  
said processor further comprising identifying a subset of said image enhancing techniques based on said acquisition type.

21. (original) The system of claim 17, further comprising an input for predefining at least one subset of said image enhancing techniques, said processor using said at least one subset to process said multiple images.

22. (original) The system of claim 17, further comprising:  
an input for receiving an acquisition type; and

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said transducer further comprising having a transducer type, said processor further comprising identifying a subset of said image enhancing techniques based on said transducer type.

23. (original) The system of claim 17, further comprising:  
a memory for storing said volumetric data set; and  
said processor further comprising retrieving said volumetric data set from said memory prior to said processing.

24. (original) The system of claim 17, further comprising at least one rendering setting control for identifying said image enhancing techniques.